

IMS SERIES LOADERS

Hopper Mount and Just-In-Time Material Loaders

Models 200, 400, 800, 200JT & 300JT

INSTRUCTION MANUAL



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IMS Company
10373 Stafford Road
Chagrin Falls, OH 44023-5296

Telephone: (440) 543-1615
Fax: (440) 543-1069
Email: sales@imscompany.com
Website: www.imscompany.com

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Hopper Mount and Just-In-Time Material Loaders

Model	200	400	800	200JT	300JT
Hopper capacity (LBS)	6.6	13.2	26.4	6.6	13.2
Motor power (Volts)	110/115/60/1				
Throughput (LBS/hr) *	154	308	440	154	308
Probe diameter (inch)	1.5				
Mounting diameter (mm)	214	265	265	60x60	60x60
Depth (mm)	334	347	347	312	347
Overall height (mm)	500	620	755	615	735
Weight approx (Kg)	12	13	15	13	14

* Material Dependant

1 INTRODUCTION

IMS Company reserves the right, at any given time, to alter the information in this operation manual. IMS Company is not responsible for any mishandling or damages occurring when using this operation manual.

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1.1 Warning and Symbols Information

The following warnings and symbols are used in this operation manual:



This symbol indicates key operating instructions.



This symbol indicates that serious damage to the machine or personal injury may occur if indicated precautions are not followed accordingly.

1.2 Safety Information and Precautions

The safety information and precautions noted in this operation manual are directed to all personnel.

This operation manual should be used by all personnel operating the Loader.

In every instance, be sure all operating personnel are familiar with this manual and the Loader.

1.2.1 For Your Safety

Keep this operation manual available and near the Loader at all times.

IMS Company assumes no responsibility for changes or modifications to the Loader without prior consent. These changes could damage the equipment and result in physical harm or violate your warranty. Please contact IMS Company prior to making structural modifications to the Loader.

Maintenance of and repairs to the Loader should be carried out by qualified personnel only, and with the spare parts provided only by IMS Company.

Operating and maintaining the Loader must be done by qualified personnel only.

Disconnect power supply before beginning any maintenance of, or repairs to, the Loader.

1.2.2 For the Safety of the Loader

Use only original Loader spare parts.

Observe the maintenance schedule.

Be aware that electronic components can be damaged by static.

1.3 Unpacking and Inspection

Loaders are shipped complete with all controls for automatic operation. The only utilities required are:

110/115/120 volt power supply

Compressed air at approximately 80 PSI (minimum 70 PSI; not exceeding 100 PSI)

After receipt of the IMS Series Loader, completely inspect it for damage.

NOTE: Although Loaders are packaged securely, vibration and mishandling during transit can cause damage.

The Loader is shipped with a complete hardware package, consisting of:

Flexible tubing for 15 ft. rise

Material suction wand

Hose clamps



2 INSTALLATION AND START-UP

IMS Series Loaders are completely automatic, self-cleaning vacuum loaders designed to convey virgin pellets, additives, and regrind materials from storage containers to drying hoppers, or directly to process machines.

IMS Series Loaders utilize a powerful vacuum motor to create a vacuum to draw material into the hopper body. A cycle is initiated when control receives a request signal from the flap switch located on the side of the Loader. The Loader cleans the filter with pulses of compressed air before each loading cycle. After the cleaning cycle is finished, the vacuum motor starts operation and draws material into the hopper body for a pre-adjusted amount of time. When the vacuum motor stops, material discharges through the flap door. During discharge, any signal from the flap door is ignored.

The cleaning, loading, and emptying continues until the hopper or surge bin is full. At that time, the material holds the flap door open, placing the system in a standby mode. As material is withdrawn from the hopper, the material level drops, the flap door swings free, and the Loader activates again.

Once the filter cleaning pulses start, the entire cycle continues even if the flap door is held in the open position. The length of cleaning, loading, and emptying cycles is adjustable.

To efficiently operate the hopper loader, adjust the material probe and loading times.

Loading times should be adjusted so the hopper loader is half full at the end of the convey cycle.



Warning: DO NOT allow the Loader to overfill. Overfilling may result in damage to vacuum motor and filter.



Clean virgin pellets require a minimum pulse sequence, while very dusty regrind material may require a maximum pulse sequence.

The material probe should be positioned firmly down in the drum or gaylord box until steady material flow is achieved.

2.1 Mounting Instructions

Mount the IMS Series Loader onto the hopper lid or loader mounting bracket.

Position the Loader so the material inlet is directed toward the material pickup point.

Make sure the flap door has enough room to operate freely.

The conveying line should be horizontal and/or vertical and should be as straight as possible without any slope.



If the Loader is mounted on a moving machine, the flap door on the Loader must be perpendicular to the machine's motion.



All line connections should be no longer than necessary. Excess hose will reduce the IMS Series Loader's conveying efficiency.

2.2 Connection Instructions

Connect the filtered and regulated 3/8" compressed air line to the air valve inlet on the loader lid. The minimum requirement for effective filter cleaning is 70 PSI.



Warning: DO NOT exceed 100 PSI.



It is recommended that a dedicated 20-amp 115V supply be used to power the Loader.



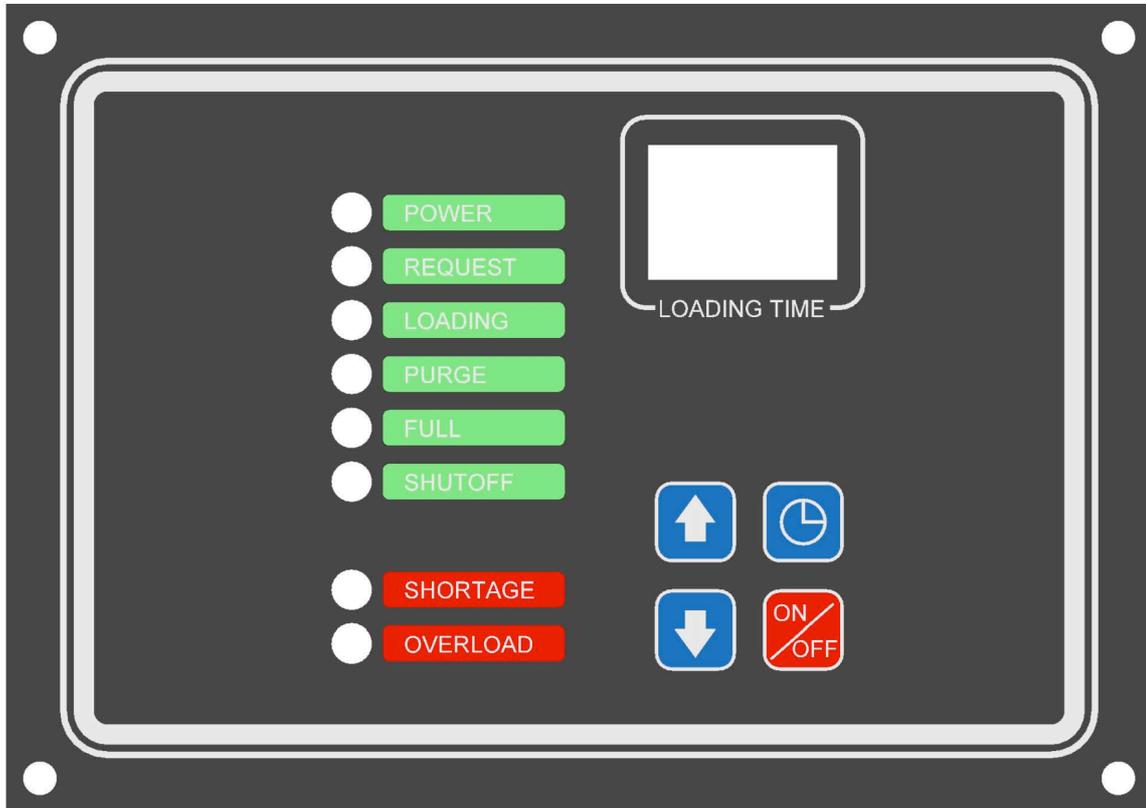
Warning: DO NOT use an extension cord over 20 feet in length. This may result in overheating and will cause damage to the vacuum motor and controls.

3. DESCRIPTION AND SPECIFICATIONS



The IMS Series Loader control requires 115V single-phase power supply

OVERVIEW OF CONTROL PANEL



3.1 Setting Loading Parameters

To adjust parameters, you must be in the function menu.

To enter the functions menu press 

To select and set a specific function (F0-F6),  press

To adjust the function's value, press  

Press  to save the value

To exit the functions menu without saving the value and default to the formerly saved value, press 

For Example: To adjust the loading time F3

1) Check that the power is ON.

- 2) Press  until F3 is shown on the display.
- 3) Press   and choose F3 to display the current loading time set point.
- 4) Press   repeatedly to change the loading time.
- 5) Press  or wait 10 seconds to save the new value, or press  to abandon changes

and begin normal operation.

3.1.0 Setting Loading Parameters, continued

3.1.1 Delay Time (F0)

Delay Time is the time from when the loader signals that it needs material to the time that the clean cycle initializes to begin the loading of your Loader. This can be set from 0-99 seconds and is shown on the display as function F0.

3.1.2 Filter Cleaning Time (F1)

Filter Cleaning Time is the time (in seconds) that the Loader pulses to clean its cloth filter. This can be set from 3-99 seconds and is shown on the display as function F1. If set to 0, it will disable filter cleaning.

3.1.3 Quantity of Filter Cleaning (F2)

Quantity of Filter Cleaning is the number of loads that the Loader performs for every single filter cleaning. This can be set from a range of 0-99 times and is shown on the display as function F2. If you set this to 0, it will clean the filter after every loading cycle.

3.1.4 Loading Time (F3)

Loading Time is the time the vacuum motor will be initialized to pull material for a load cycle. This is the time the loader is actually pulling from a storage location to the loader and can be adjusted from 0-99 seconds. It is shown on the display as function F3. The higher the value stored for F3, the more material brought per loading cycle

3.1.5 Line Clearing Time (F4)

Line Clearing Time is the time the vacuum motor runs to evacuate all excess material from the material line. This can be set from a range of 0-99 seconds and is shown on the display as function F4. If the Loader does not have line clearing, or if you prefer to disable line clearing, set F4 to 0.

3.1.6 Empty Time (F5)

Empty Time is the amount of time from when the Loader's loading cycle ends to the time the control checks for completion of falling material. This can be set from a range of 0-99 seconds and is shown on the display as function F5. The more material the Loader pulls for a single loading cycle, the higher in value the empty time must be set. This is to avoid alarming from a faulty loading cycle. Storing a value of 0 can disable this function.

3.1.7 Drop Detection Mode Selection (F6)

Check Loading Fault Mode can be set to a value of 0 or 1 and is shown on the display as function F6. If a value of 0 is set, the Loader checks for a proper signal AFTER empty time. If a value of 1 is set, the Loader checks for a proper signal DURING empty time.

3.1.8 Alarm Setting (F7)

Alarm Setting sets the number of consecutive convey faults before the alarm is activated: (0 = 1, 1 = 2, etc. to 99 = 100) .The factory setting is 0

3.1.9 Alarm Stop Function (F8)

Alarm Function sets the loader so it will either continue to convey after the alarm (0) or won't convey until the fault is cleared (1). The factory setting is 0.

3.2.0 Motor reversal protection time (F9)

To delay the motor start time by temporarily shutting down its operation to prevent motor damage. This can be set from a range of 1-99 seconds and is shown on the display as function F9.

3.2.1 Preparation time (FA)

Loading signal on after running time, repeat loading action. This can be set from a range of 0-99 seconds and is shown on the display as function FA.

3.2.2 Motor Delay Stopped Time (FB)

If no loading signal, the motor can be delayed before attempting to load again. This can be set from a range of 0-99 seconds and is shown as function FB.

3.2.3 Drop Detection Time (FC)

Drop detection signal OFF time This can be set from a range of 1-99 seconds and is shown on the display as function FC.

3.2.4 Cleaning Action Time (FD)

On = FD, Off = 0.8 SEC

3.2.5 Recycling material valve action time (FE)

When "unlocked", this feature allows the user to program how long the unit will run before switching valves of an attached proportional valve. (Sold separately). This can be set from a range of 0-99 seconds and is show on the display as FE.

Setting Parameters

NO.	Name	Parameters		unit
		Factory value setting	Range	
F0	Delay Time	3	99	sec
F1	Filter Cleaning Time	20	0-99	time
F2	Quantity of Filter Cleaning	20	0-99	sec
F3	Loading Time	30	1-99	sec
F4	Line Clearing Time	5	0-99	sec
F5	Empty Time	30	0-99	sec
F6	Drop Detection Mode Selection	0	0-1	
F7	Alarm Setting	3	0-99	
F8	Alarm Stop Function	0	0-1	
F9	Motor reversal protection time	30	1-99	sec
FA	Preparation time	0	0-99	sec
FB	Motor Delay Stopped Tme	0	0-99	sec
FC	Drop DetectionTime	1	1-99	0.025 sec
FD	Cleaning Action Time	5	0-1	sec
FE	Recycling material valve action time	0	0-99	sec

Note: Features F9 through FE are unavailable or "locked" by default. To "unlock" the features, set F3 (Loading Time) to 98 and F4 (Line Clear Time) to 97. Some features are not used unless the loader is equipped with a proportional valve or connected to other equipment.

1. If you don't press the button in order to stop the loader.
2. Press  to display F0, press  again to display F1, then press  will display F2>F3---->F8>F0 orderly.
3. Choose the parameter you would like to revise, you can press   to set.
4. if need to revise other parameters, press  enter into next parameter screen. If need not to revise other parameters, press  to finish.

4. OPERATING INSTRUCTIONS

4.1 Operation of the Loader

Flip the toggle switch located on the right side of the control to the "ON" position. POWER ON LED indicator should light.

Set up parameters F0 through F6 if necessary, as described in the previous section. "On/Off" Press to start operation of the Loader. If the material Loader's hopper is empty, REQUEST LED indicator will light and the Loader will start operating. If the Loader's hopper is full, FILL LED indicator will light and Loader will go into a standby mode.

Operation of the Loader starts with Delay Time (F0). When Delay Time expires, the loader activates Filter Cleaning Time (F1)

During Filter Cleaning Time (F1), compressed air is blown in pulses across the cloth filter to remove accumulated particles. During this function, FILTER CLEAN LED indicator will light. Filter Cleaning Time may not occur every cycle depending on the setting of Quantity of Filter cleaning function (F2).

Once the Filter Cleaning Time expires, the loader activates Loading Time (F3). During this function, the vacuum motor is turned on and material is drawn from the material source into the loader's hopper body. The creation of the vacuum inside the loader's hopper body will close the flap door. During this function, LOADING LED indicator will light.

If Line Clearing Time (F4) is set in the loading parameters, the vacuum motor will run for the length of Loading Time (F3) plus the length of Line Clearing Time (F4). When Loading Time expires, the vacuum motor turns off, the weight of material inside the loader's hopper body opens the flap door, and material is discharged.

Discharging of material is also called Empty Time (F5). During this time, the signal from the flap switch to the controller is ignored. If the material hopper is full after discharging, material will hold the flap door open placing the system in a standby mode. As material is withdrawn from the hopper, the material level will drop, the flap door will swing free, and the Loader will activate again. If the material hopper is not full, a new cycle will be initiated. In addition, an audible alarm will sound and the FAULT LED indicator will light.

This is to alert the operator of possible loading problems such as a clogged material line or an empty material source, etc.

4.2 Ground the Loader for Static Control

Static electricity can build up at the material line, the suction wand/probe, or on the Loader itself due to the movement of the material. It is recommended the loader be grounded.

Static can cause damage to the electronic circuitry and sensors.
Grounding can save downtime and the cost of new circuit boards.

There is 1 holes at the top of the suction wand.
Start the loader with maximum airflow and adjust as necessary.



Figure 4.2(1)

Initially, don't cover the hole when installing. If more suction is needed, then cover the hole.



Figure 4.3

5. TECHNICAL SPECIFICATIONS

5.1 Reed Switch Adjustment

1. Loosen the 3mm (M3) bolts (2)
2. Move the reed switch (15) to the desired position.
3. Remove the front cover of the control (circuit board is located in the back of the control enclosure).
4. Place ohm meter leads on the reed switch terminals "Require" and "-" located on the right hand side of the control board. The ohm meter should read infinite ohms (hopper loader full, or flap door open).
5. When allowing the flap door to hang freely, the ohm meter should read zero ohms (hopper loader needs material, or flap door is in free position).
6. Adjust the reed switch so the reading on the ohm meter is at infinite ohms when the flap door is approximately 3/4" back from the free hanging position.
7. When the reed switch is in the correct position, tighten the bolts.



Warning: DO NOT over-tighten the bolts. This could break the reed switch.

5.2 Changing the Reed Switch

1. Remove 3mm bolts (2).
2. Disconnect reed switch leads from the terminal board.
3. Remove the reed switch.
4. Install a new reed switch.

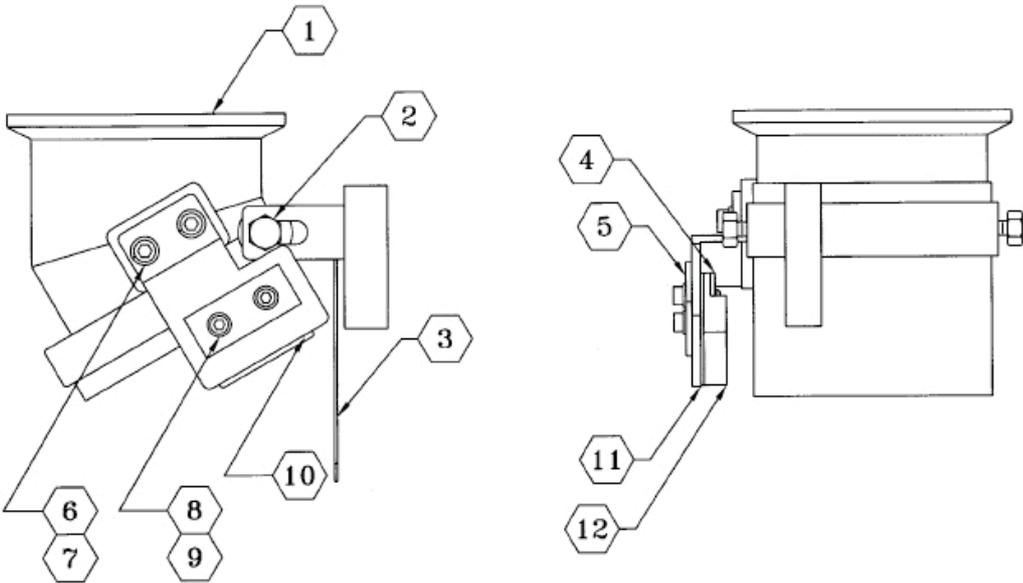


Warning: DO NOT over-tighten the bolts. This could break the reed switch.



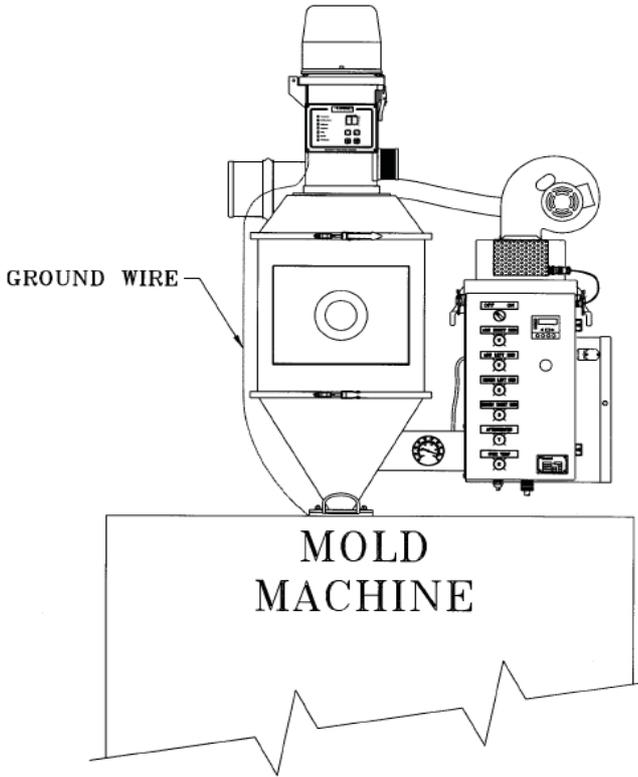
Make sure the reed switch does not interfere with the movement of the flap door.

5.3 Reed Switch Mounting Detail



- | | | |
|--|-------------------|--|
| ① SWING BASE
PART NUMBER TM-A12-103 | ⑤ RETAINING PLATE | ⑨ #3 WASHER |
| ② BOLT | ⑥ 5MM X 10MM SHCS | ⑩ REED SWITCH MOUNTING BRACKET
PART NUMBER TM-A12-105 |
| ③ FLAP DOOR
PART NUMBER TM-A12-101 | ⑦ #5 LOCK WASHER | ⑪ TEFLON BARRIER |
| ④ LOCKING PLATE | ⑧ 3MM X 10MM SHCS | ⑫ REED SWITCH
PART NUMBER CE12110 |

5.4 Ground



6. TROUBLESHOOTING

6.1 Troubleshooting Problems

Most loader problems are the result of dirty filters, air leaks, or improper adjustments. These items should be checked first before assuming equipment failure.

Motor will not run	A, B, C, H, K
Inadequate or no vacuum	D, E, F, G, J
Inadequate or no material flow	C, D, E, F, G, I
Motor runs but pulse solenoid not operating	K, L

6.2 Troubleshooting Conditions and Solutions

	Check	Conditions	Solution
A	Power supply	No voltage or incorrect supply-voltage at outlet	Check incoming power
B	Stop/Start Switch	No voltage through switch	Replace switch
C	Vacuum Motor	No voltage at motor	See A, B, and K
		Voltage at motor, amperage incorrect	Replace motor
D	Cloth Filter	Filter dirty	Clean or replace filter (also see G and J)
E	Vacuum and material	Obstructed	Remove obstruction lines
F	Leaks in system	Air leaking into system	Replace gaskets, repair leaks as necessary
G	Blowback air pressure incorrect	Low pressure	Increase pressure (not to exceed 100 PSI)
H	Reed Switch	No voltage through switch	Replace or adjust switch
I	Load time	Chamber not filling sufficiently	Increase load time
		Chamber overfilling	Decrease load time
J	Pulse rate	Insufficient to clean filter	Increase rate
K	Power and/or pulse	No voltage output to solenoids or motor SSR	Replace board
		No voltage through SSR	Replace SSR
L	Pulse Solenoid	No voltage to solenoid	See K
		Voltage present at solenoid, but no pulse	Replace solenoid (also see G)

7. MAINTENANCE

7.1 Scheduled Maintenance

Daily:	Bi-Monthly:
Check Filters:	Check motor brushes
Semi-Annually:	Check all mechanical connections

7.2 Brush Replacement

1. Disconnect power from unit
2. Remove motor hood by removing the (4) 6mm screws.
3. Disconnect and change the brushes in the following manner:



Note: Brushes should be changed before the brush stunt touches the commutator.

For 5.7" (145 mm) Diameter Vacuum Motors:

Insert a standard blade screwdriver between the top of the brush mechanism and the brush lead wire clip. Gently tap the screwdriver handle until the clip touches the commutator (some models have blade terminals on the brush holder). For these units, remove the connector from the blade terminal. For bypass motors, it is necessary to carefully remove the ventilation fan cover first

Remove the brush clamp screws with Phillips screwdriver.

Once the brush mechanism is free, remove the brush clip. To install a new brush mechanism, first insert the brush clip between the nylon insulator and the brass and push in straight by hand. Use needle nose pliers to gently seal the clip. For the units with a blade terminal in the brass sleeve of the brush mechanism, push the connector onto the terminal.

Insert the locator tab on the bottom of the brush mechanism into the corresponding hole on the top of the commutator end bracket and secure the brush mechanism with the brush clamp and screws that were earlier removed.

4. To properly seat the new brushes to the commutator face and enhance the performance and overall life to the brush, the motor must be run at half voltage for 30 minutes with an orifice plate. If a variac or other voltage control device is not available, two motors may be run in electrical series. This reduces the voltage to each motor, as each will receive approximately half of the supply voltage. Connect one lead from each motor using a wire nut. Connect the other two leads to the power source.
5. After running the re-brushed motor for 30 minutes at half voltage, it can be run again at full voltage.
6. Reinstall the motor shelter.



Note: The estimated brush life is approximately 250 hours under normal operating conditions.



Warning: On reassembly and handling, the lead wires must be kept away from rotating parts.



NOTE: To achieve best performance, new brushes should be seated on the commutator before full rated voltage is applied.

The motor manufacturer recommends the following procedure:

After brush change, apply 50% to 75% of rated voltage for 30 minutes to accomplish this seating.

The motor will return to full performance after 30-45 minutes of running at full rated voltage. The motor must not be run with the vacuum air inlet sealed off.



Warning: Direct application of full rated voltage after changing brushes will cause arcing, commutator pitting, and reduced overall life.



Note: If reduced voltage is unavailable, connecting two motors of similar rating in series for 30 minutes will accomplish brush seating.

8. EXPLOADED VIEW AND PARTS LIST

8.1 Model 200 LOADER EXPLOADED VIEW

Version	Revised	Date	Designer
A1	Released again	Dec. 15, 2015	Gavin
A2	Changed to two clips	Dec. 21, 2015	Gavin

040	M5 Round Nut	4
039	C3Y-006A-1 Seal Gasket (2") / C3Y-006B-1 Seal Gasket (1.5")	1
038	C3Y-006A Circle Seal Kit (2") / C3Y-006B Circle Seal Kit (1.5")	1
037	E3Y-005A Fitting Pipe (2") / E3Y-005B Fitting Pipe (1.5")	1
036	M5*16 Screw & M5 Gasket	4
035	M5*10 Screw & M5 Gasket	4
034	M5 Round Nut	4
033	H0.7XØ11 Spring	1
032	Hinge Pin L50*Ø6	1
031	Hinge EV03016-001	1
030	Cable Gland PG9 (Gray)	2
029	M4X8L Screw	2
028	Fixed Stand for Spraying Valve B004040201	1
027	Screw M6X12MM	4
026	Straight Connector SPC 801 Ø8 for air	2
025	Solenoid Valve ED-12 DC24V incl. stand	1
024	Handle (120)	1
023	3L Motor Shelter TM-A11-109 (White-Pink)	1
022	M6X12L Screw	4
021	Vacuum Pump R31ALSS240V1100WCL1	1
020	L Type Fixed Screw M8	4
019	Silicon Gasket H3.5*Ø110(Brick red)	1
018	PT1/8"Thread Straight Connector (for Ø8)	1
017	CV03003-002 Lid	1
016	Metalic Filter Ø197*T3DN:EV03009	1
015	Gasket H10*Ø202 EV03008	1
014	C3Y-000 Cross Beader	1
013	Clip DK602-3B-1E	2
012	Control Box (incl. Front Panel and I/O Board)	1
011	M4 Big Round Screw	1
010	C3Y-003C Cloth Filter Cover	1
009	C3Y-004 Cloth Filter	1
008	C3Y-007 Bottom for Control Box	2
007	Sanitary Clamp 3A-13MH2.5"	1
006	Gasket Ø2.5"Silicon	1
005	Valve Base	1
004	Screw M6X15MM	4
003	Plate Pinch E03010-001	4
002	3LTR Hopper Base E03006-001	1
001	Silicon Gasket Ø234xL7.5	1

Item	Spare part list	Q'ty
040	M5 Round Nut	4
039	C3Y-006A-1 Seal Gasket (2") / C3Y-006B-1 Seal Gasket (1.5")	1
038	C3Y-006A Circle Seal Kit (2") / C3Y-006B Circle Seal Kit (1.5")	1
037	E3Y-005A Fitting Pipe (2") / E3Y-005B Fitting Pipe (1.5")	1
036	M5*16 Screw & M5 Gasket	4
035	M5*10 Screw & M5 Gasket	4
034	M5 Round Nut	4
033	H0.7XØ11 Spring	1
032	Hinge Pin L50*Ø6	1
031	Hinge EV03016-001	1
030	Cable Gland PG9 (Gray)	2
029	M4X8L Screw	2
028	Fixed Stand for Spraying Valve B004040201	1
027	Screw M6X12MM	4
026	Straight Connector SPC 801 Ø8 for air	2
025	Solenoid Valve ED-12 DC24V incl. stand	1
024	Handle (120)	1
023	3L Motor Shelter TM-A11-109 (White-Pink)	1
022	M6X12L Screw	4
021	Vacuum Pump R31ALSS240V1100WCL1	1
020	L Type Fixed Screw M8	4
019	Silicon Gasket H3.5*Ø110(Brick red)	1
018	PT1/8"Thread Straight Connector (for Ø8)	1
017	CV03003-002 Lid	1
016	Metalic Filter Ø197*T3DN:EV03009	1
015	Gasket H10*Ø202 EV03008	1
014	C3Y-000 Cross Beader	1
013	Clip DK602-3B-1E	2
012	Control Box (incl. Front Panel and I/O Board)	1
011	M4 Big Round Screw	1
010	C3Y-003C Cloth Filter Cover	1
009	C3Y-004 Cloth Filter	1
008	C3Y-007 Bottom for Control Box	2
007	Sanitary Clamp 3A-13MH2.5"	1
006	Gasket Ø2.5"Silicon	1
005	Valve Base	1
004	Screw M6X15MM	4
003	Plate Pinch E03010-001	4
002	3LTR Hopper Base E03006-001	1
001	Silicon Gasket Ø234xL7.5	1

	Name	Model 200 Exploded View	Projection	Third	Date	Dec. 21, 2015
	No.	200 Series	Scale	1:1	Drawer	Gavin
			Unit	MM		

8.2 Model 400 LOADER EXPLODED VIEW

Version	Revised	Date	Designer
A1	New Verison	Apr. 22, 2015	QCR
A2	Released again	Dec. 19, 2015	Gavin

034	M5 Round Nut	4
033	C6Y-006A-1 Seal Plate (2") / C6Y-006B-1 Seal Plate (1.5")	1
032	C6Y-006A Circle Seal Kit (2") / C6Y-006B Circle Seal Kit (1.5")	1
031	E6Y-005A Fitting Pipe (2") / E6Y-005B Fitting Pipe (1.5")	1
030	M5*16 Screw and M5 Gasket	4
029	M5*10 Screw and M5 Gasket	4
028	M5 Round Nut	4
027	H0.7XØ11 Spring	2
026	Hinge Pin L50*Ø6	1
025	Hinge DN:EV03016-001	1
024	Silicon Gasket H3.5*Ø110(Brick red)	1
023	Handle (120-2)	1
022	6L,12L Motor Shelter DN:EV06008	1
021	Vacuum Pump R31ALSS240V1100WCL1	1
020	L Type Fixed Screw M8	4
019	M8 Nut	4
018	CV06004-002 E6&E12 Lid	1
017	6L Metallic Filter Ø257*T3DN:EV06009	1
016	Gasket H10*Ø262DN:EV06005	1
015	DK602-3B-1E Clip	2
014	C6Y-000 Hopper Body	1
013	Control Box	1
012	C6Y-007 Fixed Stand for Control Box	1
011	Black Gasket	1
010	C6Y-004C Cloth Filter	1
009	C6Y-003A Cloth Filter Cover	1
008	M4 Big Round Screw	2
007	Sanitary Clamp 3A-13MHH2.5"	1
006	Gasket 136;Ø2.5"Silicon	1
005	Valve Base	1
004	Screw M6X15MM	4
003	E06 Plate Pinch DN:E06006	4
002	6/12LTR Hopper Base DN:E06004	1
001	6L Silicon Gasket Ø284*L7.5	1
Item	Spare part list	Q'ty

	Name	Model 400 Exploded View	Projection	Third	Date	Dec. 19, 2015				
	No.	400 Series	Scale	1:1	Drawer	Gavin				
			Unit	MM						

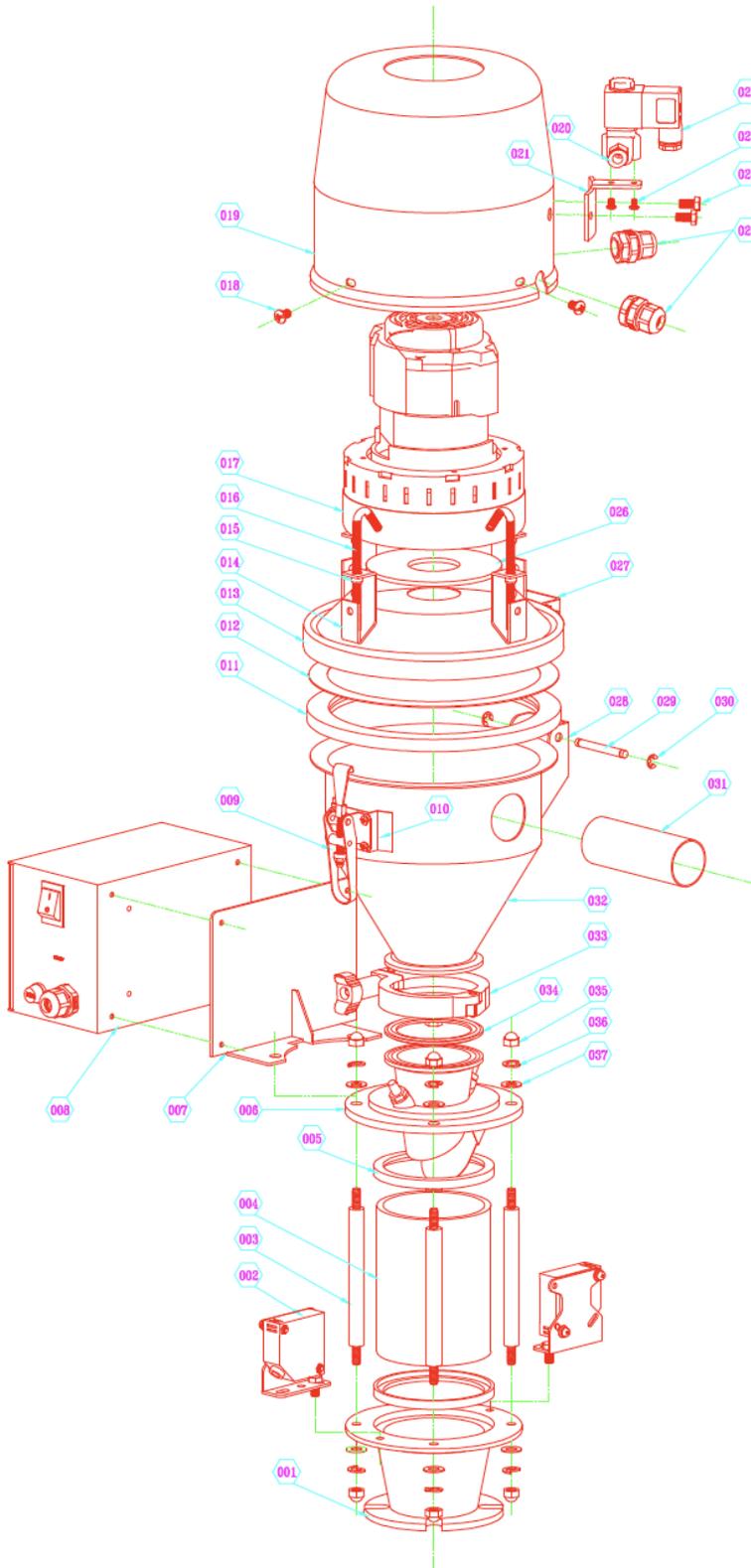
8.3 Model 800 LOADER EXPLODED VIEW

Version	Revised	Date	Designer
A1	New Verison	Dec. 24, 2015	Gavin
A2			

033	M5 Round Nut	4
032	C6Y-006A-1 Seal Plate (2") / C6Y-006B-1 Seal Plate (1.5")	1
031	C6Y-006A Circle Seal Kit (2") / C6Y-006B Circle Seal Kit (1.5")	1
030	E6Y-005A Fitting Pipe (2") / E6Y-005B Fitting Pipe (1.5")	1
029	M5*16 Screw and M5 Gasket	4
028	M5 Round Nut	4
027	H0.7XØ11 Spring	2
026	Hinge Pin L50*Ø6	1
025	Hinge DN:EV03016-001	1
024	M5*16 Srew and M5 Gasket	4
023	Silicon Gasket H3.5*Ø110(Brick red)	1
022	Handle (120-2)	1
021	6L,12L Motor Shelter DN:EV06008	1
020	Vacuum Pump R31ALSS240V1100WCL1	4
019	L Type Fixed Screw M8	4
018	M8 Nut	4
017	CV06004-002 E6&E12 Lid	1
016	6L Metallic Filter Ø257*T3DN:EV06009	1
015	Gasket H10*Ø262DN:EV06005	1
014	DK602-3B-1E Clip	2
013	C12Y-000 Hopper Body	1
012	E Type Control Box	1
011	Black Gasket	1
010	C6Y-004C Cloth Filter	1
009	C6Y-003A Cloth Filter Cover	1
008	M4 Big Round Screw	2
007	Sanitary Clamp 3A-13MHH2.5"	1
006	Gasket Ø2.5"Silicon	1
005	Valve Base	1
004	Screw M6X15MM	4
003	E06 Plate Pinch DN:E06006	4
002	6/12LTR Hopper Base DN:E06004	1
001	6L Silicn Gasket Ø284*L7.5	1
Item	Spare part list	Q'ty

	Name	Model 800 Exploded View	Projection	Third	Date	Dec. 24, 2015				
	No.	800 Series	Scale	1:1	Drawer	Gavin				
			Unit	MM						

8.4 Model 200JT LOADER EXPLODED VIEW



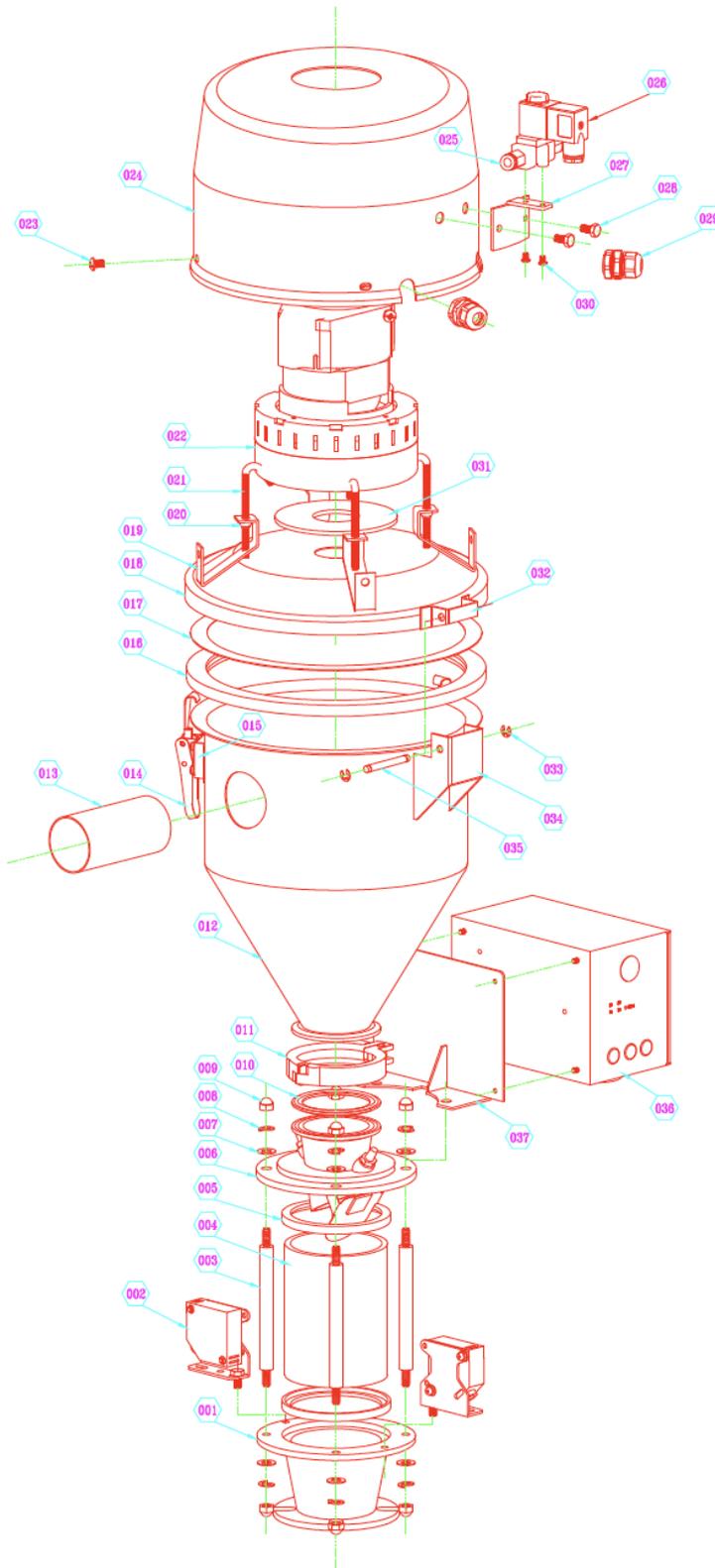
037	M8 Gasket t=1.0MM	8
036	M8 Gasket of Spring	8
035	M8 Round Screw (Nickel-plated)	8
034	Gasket Ø2.5"Silicon	1
033	Sanitary Clamp 3A-13MHH2.5"	1
032	EV03 Hopper Body DN:EV03004	1
031	CV1.5" Check Valve DN:CV03006	1
030	H0.7XØ11 Spring	2
029	Hinge Pin L50*Ø6	1
028	Lower Hinge DN:EV03016	1
027	Upper Hinge DN:E03016	1
026	Silicon Gasket H3.5*Ø110 (Brick red)	1
025	Cable Gland PG9(Gray)	2
024	Screw M6X12MM	2
023	M4X8L Screw	2
022	Solenoid Valve ED-12 DC24V incl. fixed stand	1
021	Fixed Stand for Spraying Valve B004040201	1
020	Straight Connector SPC 801 Ø8 for air	2
019	3L Motor Shelter TM-A11-109 White-pink	1
018	M6X12L Screw	4
017	Vacuum Pump R31ALSS240V1100WCL1	1
016	L Type Fixed Screw M8	4
015	M8 Nut	4
014	Fixed Plate for E Motor DN:03012-1A	4
013	3L Lid DN:EV03012	1
012	3L Metallic Filter 197*T3DN:EV03009(incl. cloth filter)	1
011	Silicon Gasket H10*202 (White)	1
010	6/12LTR Clip Stand DN:EV06007	1
009	Clip DN:CDH30-602	1
008	Control Box (incl. Front Panel and I/O Board)	1
007	EV Fixed Stand for Control Box DN:EV03019	1
006	EV03,EV06 Up Valve Base	1
005	Glass Tube Gasket H7*Ø95	2
004	Sight Glass Tube H120*90EV03006.DWG	1
003	Pillar L144*Ø370 Nickel-plated DN:EV03007	4
002	Switch Sensor E3JK-5M2(OMRON)2pc/set	1
001	EV03,EV06 Bottom Base DN:EV03010	1
Item	Spare part list	Q'ty



Name	Model 200JT Exploded View
No.	200JT Series

Projection	Third	Date	Apr. 1, 2004
Scale		Drawer	KING
Unit	MM		

8.5 Model 300JT LOADER EXPLODED VIEW



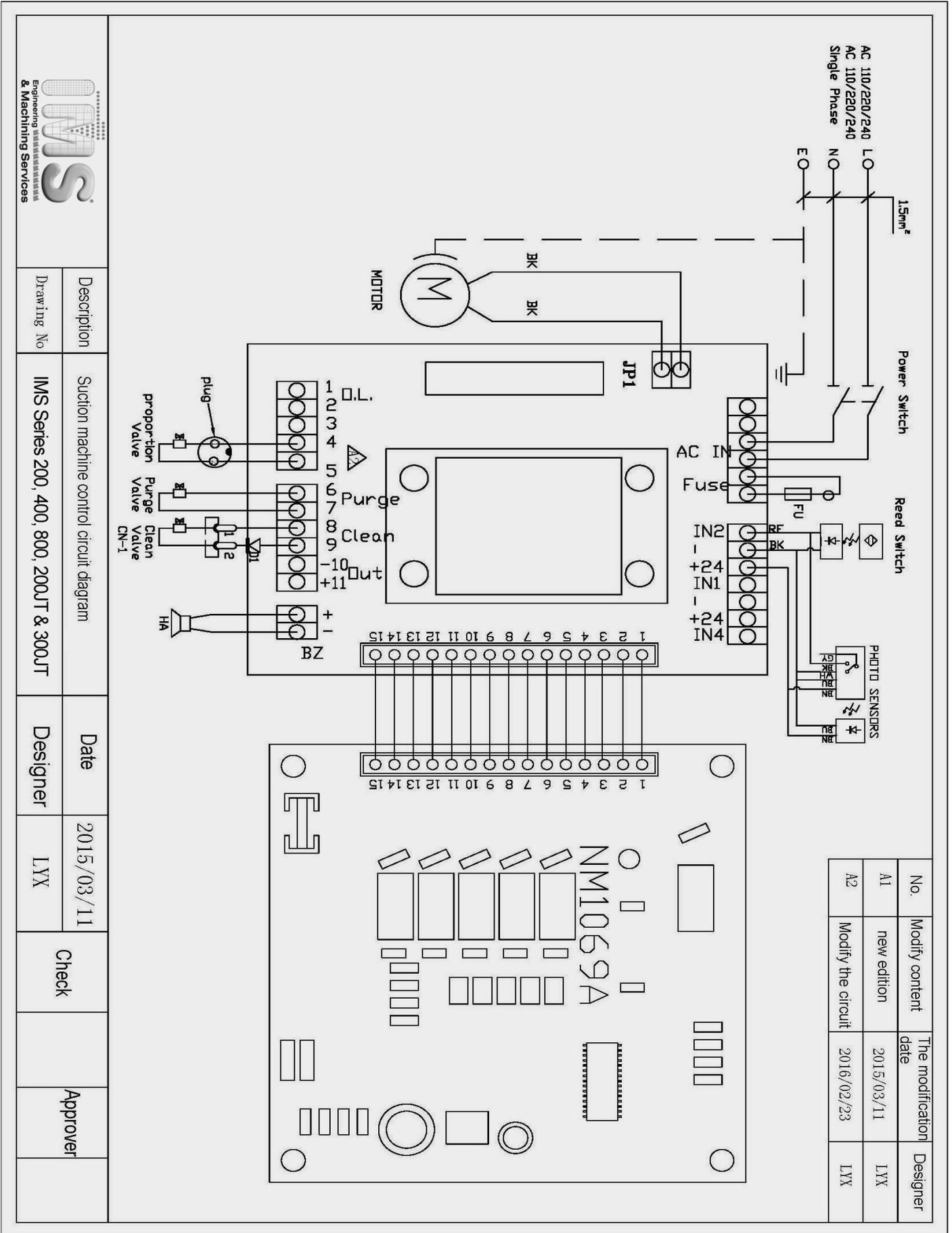
037	EV Fixed Stand for Control Box DN:EV03019	1
036	Control Box (incl. Front Panel and I/O Board)	1
035	Hinge Pin L50*Ø6	1
034	Lower Hinge DN:EV03016	1
033	H0.7XØ11 Spring	2
032	Upper Higne DN:EV03016	1
031	Silicon Gasket H3.5*Ø110 (Brick red)	1
030	M4X8L Screw	2
029	Cable Gland PG9(Gray)	2
028	Screw M6X12MM	2
027	Fixed Stand for Spraying Valve B004040201	1
026	Solenoid Valve ED-12 DC24V incl. fixed stand	1
025	Straight Connector SPC 801 Ø8 for air	2
024	6L,12L Motor Shelter DN:EV06008	1
023	M6X12L Screw	4
022	Vacuum Pump R31ALSS240V1100WCL1	1
021	L Type Fixed Screw M8	4
020	M8 Nut	4
019	Fixed Plate for E Motor DN:06012-1A	4
018	6L,12L Lid	1
017	Metalic Filter Ø257*T3DN:EV06009(incl. cloth filter)	1
016	Silicon Gasket H10*Ø262DN:EV06005	1
015	6/12LTR Clip Stand DN:EV06007	2
014	Clip DN:CDH30-602	2
013	1.5" Material Pipe	1
012	EV06 Hopper Body DN:EV06003	1
011	Sanitary Clamp 3A-13MH2.5"	1
010	Gasket Ø2.5"Silicon	1
009	M8 Round Screw (Nickel-plated)	8
008	M8 Gasket of Spring	8
007	M8 Gasket t=1.0MM	8
006	EV03,EV06 Up Valve Base	1
005	Glass Tube Gasket H7*Ø95	2
004	Sight Glass Tube H120*90EV03006.DWG	1
003	Pillar L144*Ø370 Nickel-plated DN:EV03007	4
002	Switch Sensor E3JK-5M2(OMRON)2pc/set	1
001	EV03,EV06 Bottom Base DN:EV03010	1
Item	Spare part list	Q'ty



Name	Model 300JT Exploded View
No.	300JT Series

Projection	Third	Date	May 12, 2004
Scale		Drawer	KING
Unit	MM		

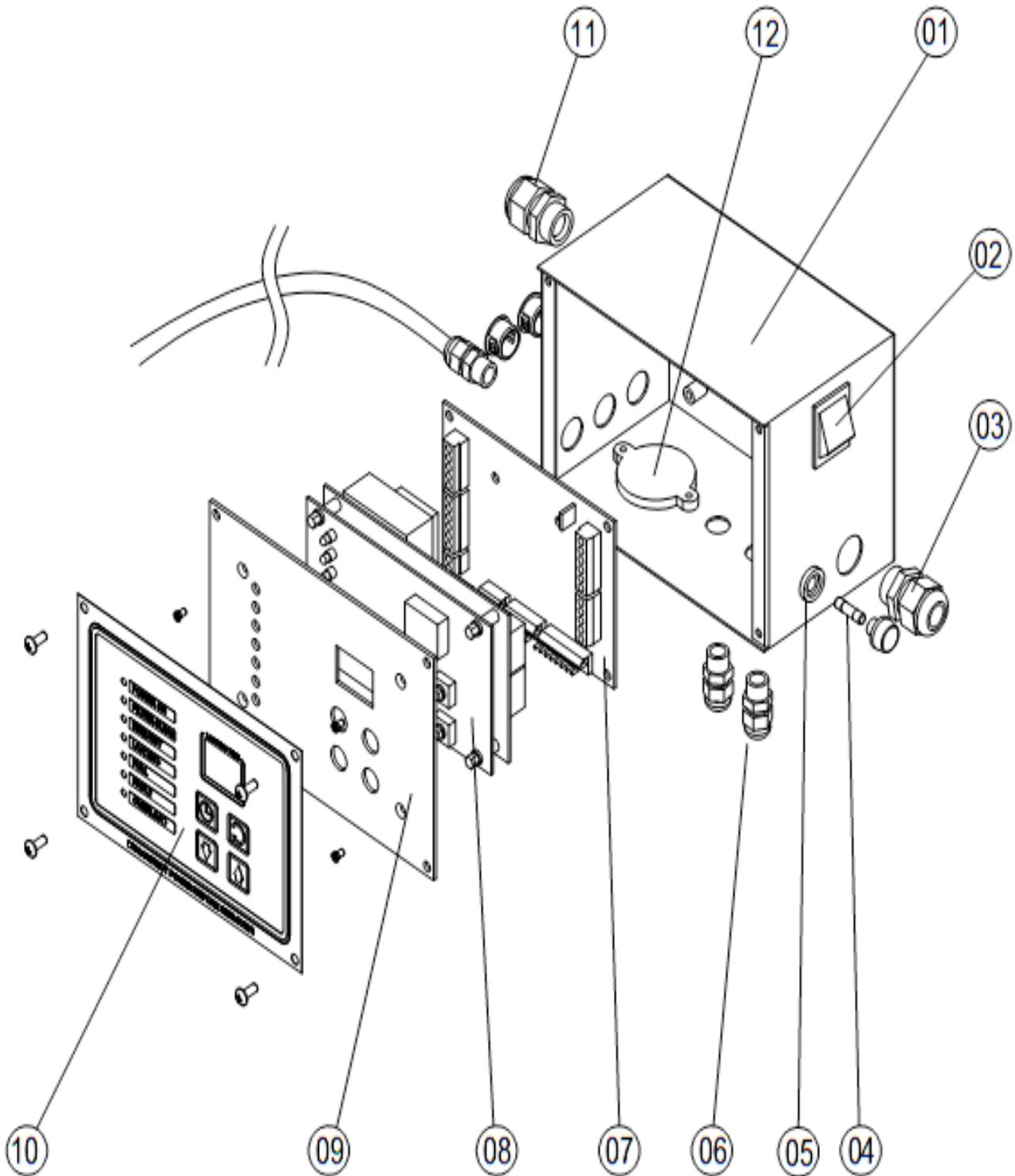
8.6. Circuit diagram



No.	Modify content	The modification date	Designer
A1	new edition	2015/03/11	LYX
A2	Modify the circuit	2016/02/23	LYX

	Description	Suction machine control circuit diagram	Date	2015/03/11	Check	Approver
	Drawing No	IMS Series 200, 400, 800, 200JT & 300JT	Designer	LYX		

8.7 Control box explosion figure



LOADER OPERATING MANUAL

NO.	specification	Shipping number	number
01	Control box	TM-E03007	1
02	power switch	TV-B02-4004302230	1
03	PG11 Cable fixed head	TV-B15-000000PG11	1
04	fuse	TV-B10-1200150030	1
05	fuse seat	TV-B10-12020FH015	1
06	PG7 Cable fixed head	TV-B15-000000PG07	1
07	NM1069B (I/O floor)	TV-B01-00010E0001	1
08	NM1069A (control panel)	TV-B01-00010E0000	1
09	Panel bracket	TM-E03009	1
10	Thin film panel	TV-B01-10000000E0	1
11	PG11 Cable fixed head	TV-B15-000000PG11	1
12	buzzer	TV-B12-0000000012	1